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IDEA-0655-68
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30 August 1968

MEMORANDUM FOR THE RECORD

SUBJECT: Trip Report, August 12-16. Burbank, Edwards, Itek,
Palo Alto and [REDACTED]

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1. Discussions with [REDACTED]

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[REDACTED] (Hqs.) at Lockheed on August 12 and 13, established revisions to the Sensor portions of Section IV of the Pilots Handbook for the U-2R. Revisions were taken to Tucson by [REDACTED] for coordination with [REDACTED]. In a meeting with [REDACTED] and [REDACTED], decided to move the T-35 tracker on switch from the Mark IV Hand Control power on switch to the unused on-off switch adjacent to it so that configuration could be put in standby before take off without turning the tracker on. With its own separate "on" switch, the tracker can be turned on or off without affecting the primary camera.

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2. An examination of recorded Q-bay temperatures with [REDACTED]

[REDACTED] revealed that temperatures in the bay vary from over 100°F at takeoff to as low as 30°F during a mission. While this condition is not acceptable, the corrective measures could not be established until the cockpit air conditioning and temperature control were finalized. These finally having been established at 65°F, it was decided to maintain the Q-bay temperature at 65°F ± 5° by insulating the Q-bay and using the present 750 Watt heater blower. It was further decided in a [REDACTED] telecon that Lockheed would provide the IRIS II wiring harness from the camera junction box to the vehicle bulkhead. This is a change from the understanding reached between [REDACTED] in June 1968.

3. At Detachment G, witnessed fit and function installation of IRIS I in 054. Installation provisions were satisfactory and no clearance problems noted using H hatch. Rack carrying recorder, air bottle and temperature/pressure probes was installed above IRIS I package. Flight test was satisfactory, although exposure was too light. No evidence of light leaks, banding, erratic film drive or image smear.

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4. Conferred with [REDACTED]

[REDACTED] No major problems exist in sensor compatibility with U-2R except need for stabilization of Q-bay temperature.

5. Inspected M&O facility of Itek, Palo Alto, with [REDACTED] field supervisor. Space, equipment and personnel

are adequate. [REDACTED] M&O as well as Blue Suit training is done in same facility which makes security awkward but not impossible; for example, a camera being serviced by project cleared people on one side of a partition is secret until it moves to the other side for Blue Suit training where it is unclassified.

6. Visited [REDACTED] California,

and received a briefing on crop prediction effort contracted for by ORD. Briefly, the program amounted to overflights of an area in North Dakota before, during, and after the wheat growing season, using black and white films with suitable filters [REDACTED] to record crop conditions. Acreages of small grain crops were measured and, using weather data available, an estimate of the North Dakota wheat yield was prepared. Predictions compare favorably with Department of Agriculture predictions. Cameras used were of comparatively low resolution (3 to 6 feet). In an effort to define requirement for possible operational use of the technique, the following questions were asked:

- a. Assuming better resolution (Delta III camera), what is the minimum number of flights required to assure crop prediction accuracies of 10%?
- b. What is the minimum number of film filter combinations required to obtain 90% confidence factor?
- c. Is it essential that exactly the same fields be covered on pre-and post-harvest coverage?
- d. To what extent does accurate meteorological data affect prediction accuracies?
- e. Of what value is color film (SO-121) in crop prediction compared to [REDACTED]

There were no positive answers to the above questions except that the most valuable film used in this series was [REDACTED]

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SSD/R&D/OSA

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